

these different factors is exemplified in the equation of Sosinsky and Sommerville set forth on page 13 of the Specification.

The importance of controlling all of these different parameters is also factually demonstrated by Example 1 and Comparative Example 1 in the Specification, as well as Figs. 1-4. The steel sheet shown in Comparative Example 1 has only 0.010 wt% of sulfur, but includes an equilibrium sulfur soluble amount (%S inc.) value of the CaO-containing oxide inclusions of over 0.1 wt%, which is much greater than the 0.03 wt% achieved in the claimed invention.

Similarly, the Kato reference discloses a method of producing molten aluminum-killed steel, in which metallic Ca is added to the molten steel to produce a Ca content of about 0.0005 to 0.005 wt%, and satisfy (% Ca) x (% S) of less than or equal to about 2×10^{-5} , but nowhere even discusses the equilibrium sulfur soluble amount (%S inc.) value of the CaO-containing oxide inclusions, much less the use of Al and Ti and the control of the other important parameters in achieving the claimed equilibrium sulfur soluble amount (%S inc.) value.

The undersigned declares that all statements made herein of his own knowledge are true and all statements made on the information and beliefs are believed to be true and further that these statements were made with the knowledge that willful false statements and the likes are made are punishable by fine or imprisonment, or both, under §1001 of Title 18 in the United States Code, and thus such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

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